

September 19, 2003

Mr. Robert L. Clark
Office of Nuclear Regulatory Regulation
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Subject: Response to Bulletin 2003-02, *Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity*
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Clark:

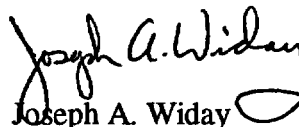
Bulletin 2003-02 was issued on August 21, 2003 to all holders of operating licenses for active pressurized water reactors (PWRs). The subject bulletin requires that the PWR addressees who will enter refueling outages before December 31, 2003 provide certain information related to reactor pressure vessel lower head penetration inspection programs within 30 days of the date of the bulletin. All other licensees are requested to provide information within 90 days of the date of the bulletin. Since Ginna Station is currently in a refueling outage, the enclosure to this letter provides the required 30 day response. A table identifying those actions committed to by Rochester Gas & Electric (RG&E) in this document is provided in Attachment A.

I declare under penalty of perjury under the laws of the United States of America that I am authorized by RG&E to make this submittal and that the foregoing is true and correct.

Any questions concerning this submittal should be directed to Mr. Brian Flynn, Manager, Primary/Reactor Systems at (585) 771-3734.

Very truly yours,

Executed on September 19, 2003


Joseph A. Widay

MDF_297
Enclosure, Attachment

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U.S. NRC Ginna Senior Resident Inspector

Bulletin 2003-02 requires the following information be provided:

(1) All subject PWR addresses are requested to provide the following information. The responses for facilities that will enter refueling outages before December 31, 2003, should be provided within 30 days of the date of this bulletin. All other responses should be provided within 90 days of the date of this bulletin.

- (a) A description of the RPV lower head penetration inspection program that has been implemented at your plant. The description should include when the inspections were performed, the extent of the inspections with respect to the areas and penetrations inspected, inspection methods used, the process used to resolve the source of findings of any boric acid deposits, the quality of the documentation of the inspections (e.g., written report, video record, photographs), and the basis for concluding that your plant satisfies applicable regulatory requirements related to the integrity of the RPV lower head penetrations.**

RESPONSE:

A description of the RPV lower head inspection program was previously provided to the NRC in response to a request for additional information related to Bulletin 2002-01 (Reference 1). As stated in this RG&E letter, the RPV lower head inspection program is performed by a VT-2 qualified individual each refueling outage (RFO). This inspection is performed approximately every 18 months with the system at normal operating pressure without removing the bottom area insulation. The insulation is not removed due to design of the reflective insulation (e.g., design drawings indicate a minimum gap to the RPV of 1/2 inch with a minimum gap of 1/4 inch around each penetration that is filled with fibrous insulation). The inspection results are documented in procedure NDE-VT-109, "Visual Examination for Leakage" which was previously provided to the NRC in Reference 1. The inspections to date have not identified any accumulation of boric acid deposits on the external surface of the insulation. As such, RG&E believes that it satisfies applicable regulatory requirements related to the integrity of the RPV lower head penetrations. If boric acid deposits were identified during these inspections, it would be entered into the Ginna Station corrective action program (i.e., ACTION Report process).

- (b) A description of the RPV lower head penetration inspection program that will be implemented at your plant during the next and subsequent refueling outages. The description should include the extent of the inspections which will be conducted with respect to the areas and penetrations to be inspected, inspection methods to be used, qualification standards for the inspection methods, the process used to resolve the source of findings of boric acid deposits or corrosion, the inspection documentation to be generated, and the basis for concluding that your plant will satisfy applicable regulatory requirements related to the structural and leakage integrity of the RPV lower head penetrations.**

RESPONSE:

As indicated in Reference 1, RG&E is planning to perform an inspection of the RPV lower head penetrations. The original inspection plan documented in Reference 1 was a "best effort" bare-metal inspection which would be performed by removing the fibrous insulation surrounding each penetration and using boroscopes and enhanced lighting. RG&E subsequently determined that it was possible to lower the entire lower head insulation a limited distance as a single package. This insulation was successfully lowered during the current RFO and bare-metal inspection activities have been initiated. The inspection will be performed using an articulating camera on a pole (or other video device) that can be inserted above the insulation to perform a bare-metal inspection of each penetration. The type of camera resolution in the area of interest will be VT-1 quality as defined in the ASME Section XI code IWA-2210.

All inspection activities will use a qualified VT-2 examiner per ASME Section XI, as supplemented by the March 2002 EPRI report (Reference 2) as applicable to lower head penetrations. If boric acid deposits or corrosion is identified during the inspection, it will be entered into the Ginna Station corrective action program (i.e., ACTION Report process) for resolution. This process will ensure that the source of any leakage is identified and that the necessary corrective actions are implemented (i.e., ensure all regulatory requirements are being met). This would potentially include the collection of visual, physical, and chemical evidence to help discriminate between deposits with operational versus outage-related sources.

RG&E will perform a bare-metal examination of the RPV lower head penetrations each RFO until changes to the ASME code or industry recommendations justify a change in the examination frequency. The results of the inspection will be documented within a written report each RFO. The photographic evidence collected during the inspection will also be retained. It should be noted that RG&E has purchased replacement insulation that is planned to be installed during the Spring 2005 RFO to support these future inspections.

- (c) **If you are unable to perform a bare-metal visual inspection of each penetration during the next refueling outage because of the inability to perform the necessary planning, engineering, procurement of materials, and implementation, are you planning to perform bare-metal visual inspections during subsequent refueling outages? If so, provide a description of the actions that are planned to enable a bare-metal visual inspection of each penetration during subsequent refueling outages. Also provide a description of any penetration inspections you plan to perform during the next refueling outage. The description should address the applicable items in paragraph (b).**

RESPONSE:

As indicated in the response to item 1.b above, RG&E is currently in the processes of performing a bare-metal inspection of all lower head penetrations.

- (d) **If you do not plan either a bare-metal visual inspection or non-visual (e.g., volumetric or surface) examination of the RPV lower head penetrations at the next or subsequent refueling outages, provide the basis for concluding that the inspections performed will assure applicable regulatory requirements are and will continue to be met.**

RESPONSE:

As indicated in the response to item 1.b above, RG&E is currently in the processes of performing a bare-metal inspection of all lower head penetrations.

- (2) **With 60 days of plant restart following the next inspection of the RPV lower head penetrations, the subject PWR addresses should submit to the NRC a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.**

RESPONSE:

RG&E will provide the requested information within 60 days of plant restart from the current refueling outage.

References:

1. Letter from R.C. Mecredy, RG&E, to R.L. Clark, *Response to Request for Additional Information Related to Bulletin 2002-01*, dated January 21, 2003.
2. TR-1006899, "Visual Examination for Leakage of PWR Reactor Head Penetrations on Top of RPV Head: Revision 1 of 1006296, Includes Fall 2001 Results," EPRI, Palo Alto, CA, March 2002.

Attachment A
List of Regulatory Commitments

The following table identifies those actions committed to by Rochester Gas & Electric (RG&E) in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Brian Flynn, Manager, Primary / Reactor Systems at (585) 771-3734.

REGULATORY COMMITMENT	DUE DATE
Perform bare-metal inspection of all lower head penetrations with appropriate documentation.	2003 refueling outage (RFO).
Submit a summary of the inspections performed, the extent of the inspections, the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.	Within 60 days after returning plant to operation following 2003 RFO.
Perform bare-metal inspection of all lower head penetrations with appropriate documentation.	Each subsequent RFO until changes to the ASME code or industry recommendations justifies a change in examination frequency.